SOFTWARE RESEARCH and DESIGN PRINCIPLES
September 2015

Research

- All aspects of tool development should be based on peer-reviewed empirical research evidence, refined on the basis of research evidence, and then serve as the basis for collecting new evidence about teaching and learning using technology.

- Emphasis should be placed on supporting meaningful motivational and learning outcomes.

- Tool design should consider what is known about the processes and contexts of learning and instruction.

Design

- We should strive to achieve the highest standards of excellence and lowest programming, interface, and instructional design error rates in the field of application and use.

- Designs should be appealing and easy to learn and use.

- Tools should be designed to address the specified goals of the target audience.

- Designs must not portray negative stereotypes (e.g., gender, racial, linguisitic, ethnic, religious, etc.) or depict violence.

- To the extent possible, tools should be inclusive and conform to Universal Design Principles.

- Technical support should be readily available and integral where possible.

- Professional Development, with an emphasis on pedagogy, should be readily available and integral where possible.

- Designs should emphasize adoption and use by the largest possible audience with a balance between the state of the practice and the state of the art.

- Assumptions about physical (e.g., input devices) and cognitive skills (e.g., memory/attention, problem solving, self-regulation, etc.) interpersonal (e.g., collaboration), and other skills needed to use the tools for learning should be specified by design and validated (e.g., via transfer to novel tasks) either before or during development.

- To the extent possible and appropriate, tools should be flexible and re-usable.

Ethics

- The intellectual property is owned by the CSLP unless otherwise specified by contractual agreements with funders.

- All those who made a contribution will receive appropriate recognition.

- Tools should reflect the values of universal human rights by avoiding any form of media that would be seen to unfairly marginalize a segment of our society.

Community

- We encourage and support design and development by collaboration among CSLP members with diverse backgrounds and skills.

- Input from the stakeholders should be sought throughout design, development, and testing.

- Tools should be scalable and sustainable with minimal post-production cost.
- Tools should be distributed not-for-profit with a philanthropic purpose in mind.